

ANNUAL REPORT



Henderson County Soil and Water
Conservation District FY 2020



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From the Board of Supervisors

The mission of the Henderson County Soil & Water Conservation District is *to provide educational, technical, and financial assistance to conserve soil, improve water quality, and enhance the natural resources of Henderson County*. We could not successfully accomplish our mission without the District's partnership with Henderson County, the USDA-NRCS, NCDA&CS, and other private and governmental organizations.

Our partners provide the foundation and much of the needed capital and technical expertise to help us accomplish our conservation programs. We are especially grateful to the Henderson County Commissioners for their financial support, as well as to the County Manager's office and other county departments for their assistance.

The Board of Supervisors and staff of the Henderson County Soil & Water Conservation District are very proud of the District's accomplishments during the 2020 fiscal year (July 1, 2019 through June 30, 2020). These accomplishments are summarized in this Annual Report.



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Chairman, Board of Supervisors

Greg Hoyt, Vice-Chairman
Wayne Carland, Treasurer
Daniel McConnell, Secretary
Jerred Nix, Member



Agriculture Cost Share Program

One major cause of water quality problems in North Carolina is nonpoint source pollution. In many places, damage to our water resources comes from soil erosion, excessive fertilizer use, animal waste contamination, and improper use of agricultural chemicals. The North Carolina Agriculture Cost Share Program (NCACSP) helps address nonpoint source pollution by providing technical and financial resources to cooperators. This program is administered through the Henderson County Soil & Water Conservation District to fund the installation of various Best Management Practices (BMPs) for water quality improvement. These funds become available after July 1 each year.

In Henderson County, the NCACSP funded the implementation of 32 BMPs in the 2020 fiscal year. In NCACSP programs alone, the Henderson County Soil & Water Conservation District received \$68,337 in program funding from the NC Division of Soil and Water Conservation. These funds were allocated to cooperators for the implementation of the following BMPs: Agrichemical Handling Facility, Well supplying water to Agrichemical Handling Facility, and Critical Area Treatment in orchards/vineyards.



Left to Right: old chemical mixing site, drilling a well for an Agrichemical Handling Facility, newly constructed Agrichemical Handling Facility, and a stabilized spray lane utilizing the Critical Area Treatment BMP. This BMP utilizes fabric filter cloth, gravel and vegetation to stabilize heavily used areas within an orchard.



Agricultural Water Resources Assistance Program

The goals of the North Carolina Agricultural Water Resources Assistance Program (AgWRAP) are to:

- Identify opportunities to increase water use efficiency, availability, and storage
- Implement Best Management Practices (BMPs) to conserve and protect water resources
- Increase water use efficiency
- Increase water storage and availability for agricultural purposes

This program was established by NC Session Law 2011-145 and is designed to assist farmers in conserving soil and improving water quality. In Henderson County, \$11,000 of AgWRAP funds were received in 2020 to meet these goals. This year's BMP was agricultural well construction to supply water for irrigation. Funding will help to increase water storage capacity on two farms for irrigation.



Construction of an irrigation pond through the AgWRAP program



Community Conservation Assistance Program

The Community Conservation Assistance Program (CCAP) is a North Carolina voluntary cost-share program that is administered by each SWCD. The program is designed to address nonpoint source water pollution from residential and urban lands not directly involved with agriculture.

CCAP pays up to seventy-five percent of the costs to install conservation practices that decrease the amount of sediment, nitrogen, phosphorus, chemicals and other pollutants that enter surface water and groundwater. Best Management Practices (BMPs) include Abandoned Well Closures, Rain Gardens, Critical Area Plantings, Riparian Buffers, Streambank Protection, Cisterns and other SWCD practices that address water quality issues.

Funding for CCAP is provided by the NC Division of Soil & Water Conservation and is awarded through a competitive regional application process. In 2020, HCSWCD was awarded \$10,186 to repair 275 feet of streambank. The project was permitted, and construction began in June 2020. The project included the installation of a floodplain bench, properly sloped banks, and native vegetation. The site received a large storm event several days after work was completed. As designed, the site withstood the storm and the elevated water levels. It is considered a successful project for the landowner and HCSWCD. Due to the time of year, livestock could not be installed. A training event to install the livestock will be planned for Spring 2021. Please see project photos on page 6.

Additionally, a regenerative stormwater control project started by a previous HCSWCD employee was completed in April 2020. The project installed a series of step pools formed with large boulders. The pools were partially filled with a mixed media to encourage nutrient breakdown before the stormwater entered a nearby stream. The day after the project construction was completed, the site received over three inches of rainfall within a three-hour period. As a result, the site had areas of washout since the soil was still loose and vegetation had not had a chance to establish. A repair contract was approved. In June 2020, the repair of the project began and consisted of removing sediment in the pools, installing additional geotextile fabric and riprap, and reseeding of damaged areas. The repairs have been completed, vegetation is growing, and the site is becoming stable. Please see project photos on page 7.

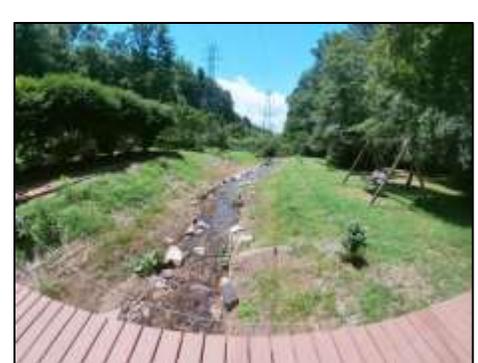
Grant funding is being pursued for other CCAP-like projects in Henderson County. One grant for \$71,600 was received in FY 2020 for a streambank restoration project at a local school. This project will restore approximately 450 feet of stream and include an educational access point. Another grant for \$150,000 was received for a large streambank restoration project at a park. The project will restore approximately 2,000 feet of stream on the park property and will also have an educational access point. Additional funds are being sought for both projects before beginning construction.

Additionally, the Conservation Engineer conducted 61 site visits to provide recommendations for improvement to landowners. Forty-nine homeowners were provided technical assistance and received answers to a variety of soil and water related questions. Five letters of recommendation detailing guidance for property improvement were written. Lastly, two assessment reports were written with recommendations for improvements, photos of the sites with descriptions of items to change, and resources for further study and/or assistance. All letters and reports were evaluating streambank erosion, drainage, and stormwater issues.

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Community Conservation Assistance Program, continued

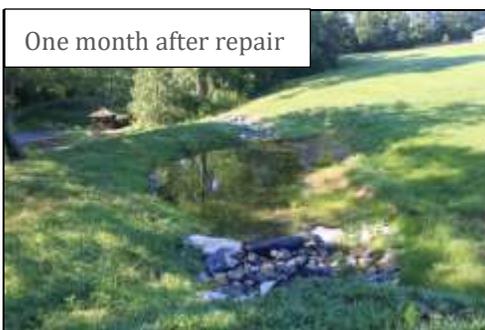
This streambank restoration project was funded through CCAP. The photos below, from top to bottom and left to right, depict initial site conditions, construction, and post-construction of the site.



HENDERSON SOIL & WATER CONSERVATION DISTRICT

Community Conservation Assistance Program, continued

This regenerative stormwater control project was funded through CCAP. The photos below, from top to bottom and left to right, depict initial site conditions, construction of step pools, damage from rainstorm, repair construction, and post repair of the site.



Natural Resources Conservation Service (NRCS)

FY20 has been a year for the record books. It has presented many obstacles and a lot of “firsts” for many of us. Even with the limitations caused by COVID-19, NRCS was able to work with producers to get conservation practices on the ground.

One of the main Farm Bill Programs that NRCS administers is the Environmental Quality Incentives Program (EQIP) to assist landowners in applying conservation best management practices (BMPs) on their working agricultural lands. EQIP supports the conservation priorities established for the Henderson County SWCD. BMPs are used to correct natural resource concerns on a variety of land uses, including pasture, cropland, and forestland. NRCS uses technical, engineering, and financial resources to assist landowners with these projects.

Another Farm Bill Program that NRCS administers is the Conservation Stewardship Program (CSP) which is a voluntary program that encourages agricultural producers to improve conservation systems by improving, maintaining, and managing existing conservation activities and undertaking additional conservation activities.

During FY20, NRCS and the Henderson County SWCD were able to partner on several projects in order to best meet the needs of the landowners and to address the resource concerns. Some of these practices implemented included but were not limited to: water wells and agrichemical handling facilities, firebreaks and prescribed burning on private forestland, stream restorations, and high tunnel installations. Please see photos of the projects on the next page.

Additionally, NRCS awarded five contracts for a total of \$731,756 on 228 acres this year. The practices to be implemented from those contracts will be: Hellbender Habitat development projects, grassed waterways, and pasture management infrastructure projects.

NRCS accepts applications for these and other programs throughout the year.



HENDERSON SOIL & WATER CONSERVATION DISTRICT



The photos on this page depict some of the projects accomplished by NRCS this year. From top to bottom and left to right:

Agrichemical Handling Facility, Prescribed Burning, Stream Restoration (before), Stream Restoration (after), and High Tunnel construction.

Educational Programs:

School Groups

The Henderson County Soil & Water Conservation District provides in-classroom presentations on soil and water topics to local schools. Presentations align with the NC Essential Standards and provide the opportunity to enhance curriculum with hands-on activities. These lessons are provided free of charge. This year, we focused on providing in-class lessons that aligned with our contest theme, "Wetlands Are Wonderful." Through these lessons, 557 students from four elementary and middle schools participated in experiments and hands-on activities relating to wetland education. These students also had the opportunity to participate in our poster, essay, and speech contests.

In addition to wetlands, our lessons focused on the water cycle and soils were very popular. During this school year we provided water cycle lessons to 344 students from six elementary and high schools. Soil lessons reached 747 students at six elementary and middle schools. Along with these popular topics, we offered lessons on water conservation, watersheds, erosion, and natural resources.

This year over 90 school presentations reached 2,453 students in 17 schools in Henderson County!

We, like so many others, were still scheduling school groups when schools were closed in mid-March. Programs had already been scheduled for 850 students for the spring that did not get the opportunity to participate in our programs. We are saddened that these students missed out and are hopeful they will have the opportunity to participate in another one of our programs in the future!



Educational Programs:

Career Days and Science Days

The HCSWCD also presented at Career Days. Elementary students learned about careers in conservation and engineering. Students had the opportunity to ask questions as they learned about soil and water. Soil and Water was also represented at Science Days where we had the opportunity to interact with students through a variety of hands-on learning opportunities.

Community Events and Workshops

The HCSWCD provides outreach and educational materials at various community festivals, events, and workshops. This year we participated in Farm City Day, the Mountain State Fair, Edneyville Nature Day, Fletcher Family Festival, and Winter Apple School. The Mountain State Fair provided the District the opportunity to educate the community on the various programs we offer. Participating in the Fair's education day this year gave us the chance to connect with local school classes during their field trip to the Fair and to teach about soil and water health. Winter Apple School allowed us to connect with local farmers to discuss opportunities for working together to improve soil and water health for Henderson County. Edneyville Nature Day and the Fletcher Family Festival both provided opportunities for community involvement and increased soil and water education and were designed for specific audiences.

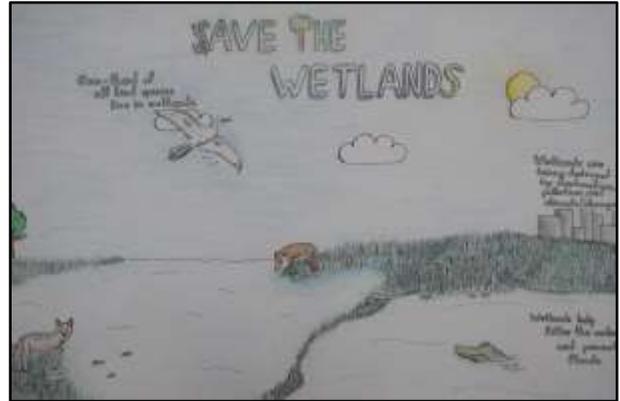


HENDERSON SOIL & WATER CONSERVATION DISTRICT

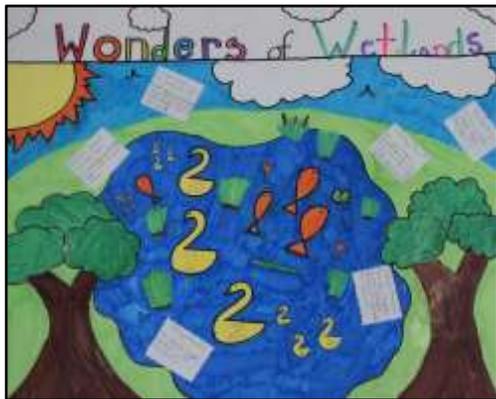
Educational Programs: “Wetlands are Wonderful” Contest Winning Posters



First Place – Third Grade



First Place – Sixth Grade



Second Place – Third Grade



Second Place – Sixth Grade



Third Place – Third Grade



Third Place – Sixth Grade

A collection of some of our many winning posters!

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs: Education Contests

Every year, the North Carolina Association of Soil & Water Conservation Districts sponsors poster, essay, and speech contests for third through eighth grade students. These contests are designed for students to become aware of and share their concerns for soil and water conservation using a predetermined theme, which for 2020 was “Wetlands are Wonderful.” Entries are judged on criteria including conservation message, originality, organization, and neatness. The essays are required to be between 300 and 500 words and the speeches are to be four to six minutes in length.

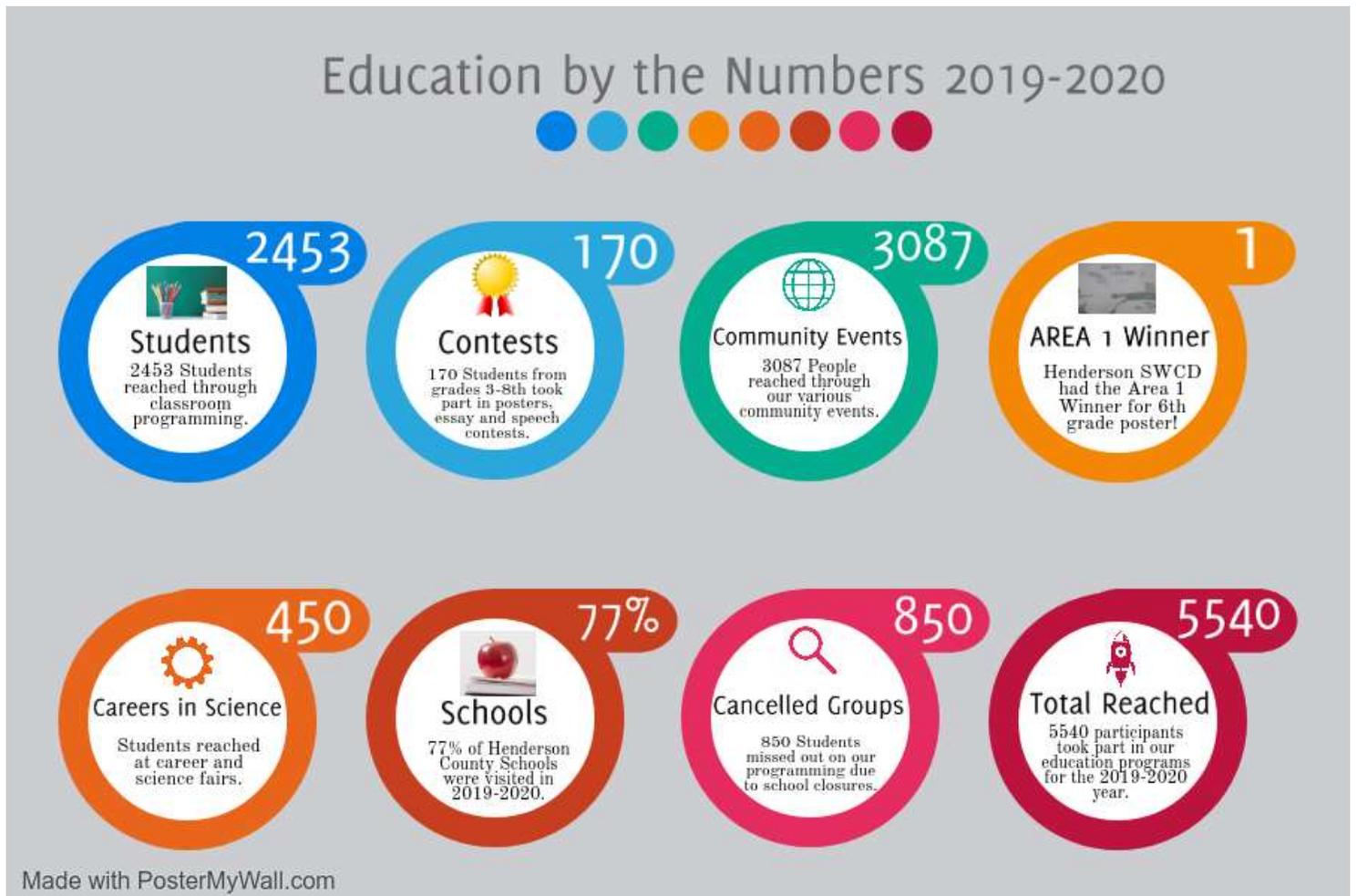
We are very proud of this year’s Henderson County participants! The winners are listed below:

GRADE	CONTEST	PLACING	STUDENT	SCHOOL
3 rd	Poster	1 st	Pressley P.	Hendersonville Elementary
3 rd	Poster	2 nd	Lia C.	Hendersonville Elementary
3 rd	Poster	3 rd	Alex P.	Hendersonville Elementary
3rd	Poster	School Winner	Chloe D.	Bruce Drysdale Elementary
4 th	Poster	1 st	Charley R.	Immaculata Catholic School
5 th	Poster	1 st	Tabitha W.	Sugarloaf Elementary
5 th	Poster	2 nd	Kaylan C.	Etowah Elementary
5 th	Poster	3 rd	Moriah H.	Immaculata Catholic School
5 th	Poster	School Winner	Gabriel M.	Bruce Drysdale Elementary
5 th	Poster	School Winner	Myles K.	Fernleaf Community Charter School
6 th	Poster	1 st	Phoenix W.	Fernleaf Community Charter School
6 th	Poster	2 nd	Liam M.	Fernleaf Community Charter School
6 th	Poster	3 rd	Izzy S.	Fernleaf Community Charter School
6th	Essay	1 st	Camila K.	Immaculata Catholic School
6 th	Essay	2 nd	Garrett C.	Fernleaf Community Charter School
6 th	Essay	3 rd	Wendy V.	Immaculata Catholic School
7 th	Speech	1 st	Daniela D.	Immaculata Catholic School
7 th	Speech	2 nd	Annabella M.	Immaculata Catholic School
7 th	Speech	3 rd	Dylan B.	Immaculata Catholic School
8 th	Speech	1 st	Luz H.	Immaculata Catholic School
8 th	Speech	2 nd	Dan G.	Immaculata Catholic School
8 th	Speech	3 rd	Caden C.	Immaculata Catholic School

We are also very proud to have the Area 1 Competition 6th grade poster winner: Phoenix W. Sixteen counties competed at the Area 1 competition. Thank you to the 170 students and six schools that participated in this year’s contests!

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs: Soil and Water Education by the Numbers



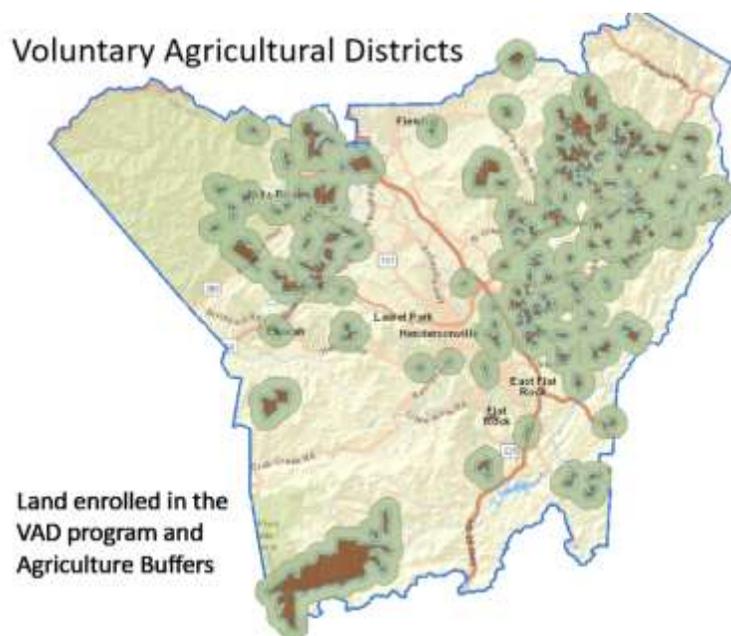
HENDERSON SOIL & WATER CONSERVATION DISTRICT

Voluntary Agricultural Districts

In 1985, North Carolina General Statute Chapter 106, Article 61, known as "The Agricultural Development and Farmland Preservation Enabling Act," authorized counties to establish farmland preservation programs by ordinance. The purpose was to encourage the preservation of qualifying farmland and to foster the growth, development, and sustainability of family farms. In 1991, the Henderson County Board of Commissioners adopted the Voluntary Farmland Preservation Program Ordinance which created the Voluntary Agricultural District (VAD) program.

The VAD program is administered by the Henderson County Soil & Water Conservation District through the five-person Henderson County Agricultural Advisory Board. Landowners interested in VAD membership apply to the Agricultural Advisory Board; there is no fee to apply. To qualify, a parcel must be in an unincorporated area of Henderson County or in the Town of Mills River; be managed in accordance with Natural Resources Conservation Service defined erosion-control practices if highly erodible land exists on the farm; and either be participating in (or qualify for) the present-use value taxation program or be engaged in "agriculture" as defined by NC General Statute 106-581.1, earning at least \$2,000 per acre in the year prior to application (or an average of at least \$2,000 per acre for five years prior to application). Landowners participating in VAD agree not to convert the land to non-farm or development use for a period of at least ten years, except for the creation of not more than three lots on a parcel.

The Henderson County GIS system, GoMaps (www.hendersoncountync.gov/gis), contains a feature to display Agricultural Districts and Agricultural District Buffer layers, which is part of the public notification portion of the VAD Program. Those interested in purchasing property in Henderson County can determine if they are near or adjacent to agricultural operations. Currently 364 parcels consisting of 11,879.1 acres are enrolled in the nine agricultural districts in the county.



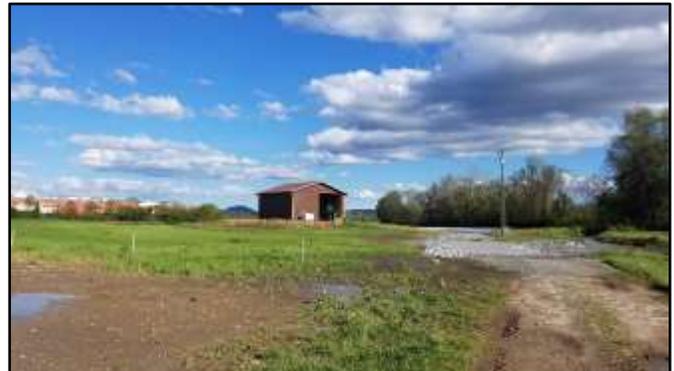
Mills River Partnership

The Mills River Partnership (MRP) is a regional non-profit organization that works to monitor, preserve, protect, and enhance the quality of public drinking water supplies in Henderson County. It relies upon the voluntary cooperation of participating landowners and focuses on watersheds that provide the drinking water supply for all of Hendersonville's and a portion of Asheville's public drinking water customers.

The MRP began as an informal organization in 1998 and is now formalizing its efforts due to increased demand for a cleaner and more sustainable drinking water supply. The MRP incorporated as a non-profit organization in August 2011 and has received 501(c)3 status from the IRS. The MRP is working with various agencies, conservation organizations, agricultural businesses, land owners, and residents in the watershed to protect and improve the water supply for consumers and other users. The MRP has received a 319 Non-Point Source Pollution Control Grant for the Mills River Watershed. The Mills River has historically moved on and off the 303(d) impaired listing.

Working with the MRP, through the 319 Grant and other funding sources, the Henderson County Soil & Water Conservation District (HCSWCD) has been working to put Best Management Practices (BMPs) on the ground within this watershed. This includes facilitating the connection between the cooperating farmers and MRP to implement the BMPs. The HCSWCD is also providing technical guidance to MRP on the design and installation of the BMPs.

Best Management Practices within this watershed include field borders, grassed waterways, riparian buffers, agrichemical handling facilities, road stabilization, and streambank protection, among others. These BMPs will help reduce nonpoint source pollution into the Mills River and will improve water quality for 50,000 households in Henderson and Buncombe Counties.



Flood waters from the Mills River used to back up into the tributary and cross this farm access road (left). After the installation of a grassed waterway with a reinforced road crossing in the fall of 2019, the road is now passable at all times (right). This is an example of a successful project conducted by the MRP and the HCSWCD.

No-Till Drill

The Henderson County Soil & Water Conservation District (HCSWCD) purchased a No-Till Drill through the TVA Ag & Forestry Fund sponsored by the NCDA&CS in 2014. With the purchase of a Truax FLEXII Series Grass Drill, the HCSWCD has been able to benefit both the land and the farmers in Henderson and Transylvania counties. The high cost of a No-Till Drill is often prohibitive for small farmers that could use this method on their land to improve soil quality and reduce erosion and run-off.

The FLEXII Series Grass Drill is designed to plant grasses and legumes on a variety of site conditions and can be accomplished through no-till and interseeding in most conditions. A common shared drill provides benefits to local residents by eliminating high initial cost investments, while providing pastureland improvement. The grass drill is for agricultural use and can assist landowners in pastureland improvement by providing excellent erosion control and soil moisture conservation. It minimizes fuel and labor costs and builds soil structure and health.

The availability of a No-Till Drill for Henderson and Transylvania Counties provides the option for local farmers and landowners to effectively and sustainably manage pasture, hayland fields, and grasslands. No-till drill seeding allows for reduced water runoff and sedimentation, efficient tractor passes through a field, soil stability and pH balance, and economic benefits.

Through implementation of a rental fee for use of the No-Till Drill, this pastureland improvement project will be able to continue over the life of the equipment. This small fee covers all maintenance needed to ensure the upkeep and good working order of the drill. This project will be self-sustained and not require any outside funding to continue.

The HCSWCD is proud to help strengthen local agriculture through assistance in efficiency, promoting sustainability, and improving water quality and soil health. The HCSWCD will continue to provide support and information to landowners wanting to improve the soil health and water quality in their community.

This year, the no-till drill was used by six operators for a variety of purposes. Buckwheat and sunflowers were drilled, cover crops were planted, and more. The drill was used by private individuals, Sierra Nevada, and an apple packing house. We are grateful to be able to offer this wonderful resource to our community.



HENDERSON SOIL & WATER CONSERVATION DISTRICT

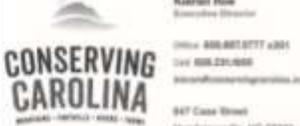
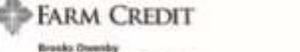
Spot Checks and District Sponsors

SPOT CHECKS

Each year the Henderson County Soil & Water Conservation District (HCSWCD) is required by the NC Division of Soil & Water to conduct spot checks on a minimum of five percent of all active contracts installed in the county. When conducting the spot checks, the HCSWCD Board and staff visit landowner's properties and check the condition and maintenance of the practice that was funded using NC Agriculture Cost Share, NC Agricultural Water Resources Assistance, or Community Conservation Assistance Program funds. This year's spot checks were conducted on September 22, 2020.

HENDERSON COUNTY SOIL & WATER CONSERVATION DISTRICT SPONSORS

The businesses listed below support the work and programs of HCSWCD. We are very grateful for our sponsors!

 <p>Saint Paul MOUNTAIN VINEYARDS</p>	 <p>AgHC AGRI-BUSINESS HENDERSON COUNTY</p>	<p>Liz Taylor, AFIS, CISR, CPIW Farm & Crop Insurance Agent Morrow Insurance Agency 800 Beverly-Hanks Centre Hendersonville, NC 28792 (828) 694-5146 Desk (828) 768-6197 Cell</p>	<p>We Would Like To Thank Our Sponsors!</p>
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 <p>Custom Printing • Copies Multi-Part Invoices • Forms Envelopes • Letterheads • Invitations Business Cards • Labels • Tags Newsletters • Graphic Design WIDE-FORMAT 12" - 64" WIDE</p> <p>Serving Henderson County Since 1921!</p> <p>127 3RD AVE. WEST - HENDERSONVILLE, NC 28792 828-693-7380 www.flanaganprinting.com</p>	 <p>Conserving CAROLINA RESTAURANT • OFFICE • HOME • TRAIL</p> <p>Kieran Rose Executive Director</p> <p>Office: 888.887.8777 x881 Cell: 888.231.8880 kieran@conservingcarolina.org</p> <p>947 Case Street Hendersonville, NC 28792 www.conservingcarolina.org</p>	<p>NORTH RIVER FARMS Specializing in High Quality Horse Hay Hay • Grains • Forage • Produce</p> <p>Jason Davis, owner/operator Candace McLaughlin 3333 North Mills River Road Mills River, NC 28759 828-890-5316 NorthRiverFarms3333@gmail.com NorthRiverFarms.co</p>	 <p>Kirby Johnson Vice President</p> <p>Mailing Address: Toll Free: (866) 721-7968 P.O. Box 609 Office: (828) 890-3630 Horse Shoe, NC 28742 Ext. 237 Physical Address: Fax: (828) 890-1019 331 Banner Farm Road Mobile: (828) 329-8622 Mills River, NC 28759 Email: kirbyj@flavor1st.com</p>
<p>We Would Like To Thank Our Sponsors!</p>	 <p>FARM CREDIT</p> <p>Brooks Overby Customer Safety/Consumer Loan Officer overby_brooks@ncfcd.com 2040 Chimney Rock Hwy., Hendersonville, NC 28792 office: 828.693.8272 ext 1100 cell: 828.774.9172 ext 828.694.8274</p> <p>CAROLINA.FARM.CREDIT.CO 888.2 + 1488997</p>	 <p>FLETCHER LAWN & GARDEN HARDWARE</p> <p>Sarah Johnson, Owner 28 Johnson Street, P.O. Box 86 • Fletcher, NC 28732 Telephone: (828) 684-0561 www.fletcherlawnandgarden.com</p>	 <p>TURF MOUNTAIN SOD, INC.</p> <p>3277 Chimney Rock Road Hendersonville, NC 28792</p> <p>www.turfmountain.com Email: turfmountain@telcel.net</p> <p>828-685-2642 FAX: 828-685-1121</p> <p>Blessed by Our Heritage - Legacy Farming For Generations</p>

HENDERSON SOIL & WATER CONSERVATION DISTRICT

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GREG HOYT
DISTRICT SUPERVISOR



Vice-Chairman
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Member
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DISTRICT AND NRCS STAFF



**Left to Right: Emily Nelson,
April Hoyt, Jonathan Wallin,
Betsy Gerwig, and Caroline
Wicker**